AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A method of manufacturing an implantable medical device, comprising:

purifying a polymer by:

introducing the polymer into a mixing apparatus;

introducing a fluid into the mixing apparatus;

mixing the fluid with the polymer;

~~removing an impurity with the fluid;~~

removing at least a volume of the fluid from the mixing apparatus such that [[the]] an impurity is completely or at least partially removed with the fluid; and

collecting the polymer after removal of the impurity; and

~~after the fluid has removed the impurity, exposing the fluid to a temperature equal to or greater than the boiling temperature of the fluid at ambient pressure prior to removing the fluid from the mixing apparatus; and~~

coating an implantable medical device with the purified polymer, or fabricating the implantable medical device with the purified polymer;

wherein the fluid is of a type to physically entrap the impurity without dissolving the impurity.

2. (canceled)

3. (original) The method of Claim 1, wherein the mixing apparatus is selected from the group consisting of a single screw extruder, an intermeshing co-rotating extruder and a counter-rotating twin-screw extruder.

4. (original) The method of Claim 1, wherein the polymer is exposed to a temperature equal to or greater than the melting temperature of the polymer.

5. (original) The method of Claim 1, further comprising heating the polymer to a temperature equal to or greater than the melting temperature of the polymer.

6. (cancled)

7. (withdrawn) The method of Claim 1, wherein the fluid is of a type to dissolve the impurity.

8. (original) The method of Claim 1, the method further comprising introducing a second fluid into the mixing apparatus, and mixing the second fluid with the polymer and removing the second fluid and an impurity from the mixing apparatus.

9. (original) The method of Claim 1, wherein the polymer is selected from the group consisting of an ethylene vinyl alcohol copolymer, poly(butyl methacrylate), poly(vinylidene fluoride-co-hexafluororpropene), polyvinylidene fluoride, poly(L-lactic acid), poly(caprolactone), an ethylene-vinyl acetate copolymer and polyethylene glycol.

10. (original) The method of Claim 1, wherein the fluid is selected from the group consisting of water, isopropyl alcohol, methanol, FLUX REMOVER AMS, acetone, ethanol, dimethyl acetamide, acetonitrile, dimethyl formamide, cyclohexane, dimethyl sulfoxide, and combinations thereof.

11. (withdrawn) A coating for an implantable medical device produced by the method of Claim 1.

12. (withdrawn) An implantable medical device fabricated by the method of Claim 1.

13. (currently amended) A method of manufacturing a coating for an implantable medical device, comprising:

(a) purifying a thermoplastic polymer ~~having an impurity~~, the purifying including

[[(i)]] introducing the polymer into an extruder,

[[(ii)]] introducing a fluid into the extruder,

[[(iii)]] mixing the fluid with the polymer,

~~(iv) removing the impurity with the fluid,~~

[[(v)]] removing at least a portion of the fluid and <u>an</u> impurity from the extruder, <u>and</u>

[[(vi)]] collecting the polymer after removal of the impurity[[, and]]<u>; and</u>

~~(vii) after the fluid has removed the impurity, exposing the fluid to a temperature equal to or greater than the boiling temperature of the fluid at ambient pressure prior to removing the fluid from the extruder; and~~

(b) applying a composition to an implantable medical device, the composition including the purified polymer, a solvent and optionally a therapeutic agent<u>;</u>

<u>wherein the fluid is of a type to physically entrap the impurity without dissolving the impurity</u>.

14. (withdrawn) A coating for an implantable medical device produced by the method of Claim 13.

15. (canceled)

16. (original) The method of Claim 13, the method further comprising exposing the polymer to a temperature equal to or greater than the melting temperature of the polymer while the polymer is in the extruder.

17. (original) The method of Claim 13, wherein the polymer is selected from the group consisting of an ethylene vinyl alcohol copolymer, poly(butyl methacrylate), poly(vinylidene fluoride-co-hexafluororpropene), polyvinylidene fluoride, poly(L-lactic acid), poly(caprolactone), an ethylene-vinyl acetate copolymer and polyethylene glycol.

18. (original) The method of Claim 13, wherein the fluid is selected from the group consisting of water, isopropyl alcohol, methanol, FLUX REMOVER AMS, acetone, ethanol, dimethyl acetamide, acetonitrile, dimethyl formamide, cyclohexane, dimethyl sulfoxide, and combinations thereof.

19. (withdrawn) A system for removing an impurity from a polymer, comprising:

(i) an extruder, the extruder having

(a) a first orifice configured to receive a polymer;

(b) an element configured to convey the polymer through the extruder,

(c) an injection port configured to receive a fluid,

(d) an extraction port configured to remove the fluid; and

(e) a second orifice configured to eject a polymer;

(ii) a pump for introducing the fluid into the injection port; and

(iii) a vacuum in communication with the extraction port.

20. (withdrawn) The system of Claim 19, wherein the extruder further comprises a zone capable of heating or cooling the polymer.

21. (withdrawn) The system of Claim 19, wherein the extraction port is positioned in close proximity to the injection port.

22. (withdrawn) The system of Claim 19, wherein the element comprises one or more screws having a configuration capable of heating the polymer through shear stress.

23. (currently amended) A method of manufacturing an implantable medical device, comprising:

purifying a polymer by:

introducing the polymer into a mixing apparatus~~, the polymer being poly(vinylidene fluoride-co-hexaflourorpropene) or poly(butyl methacrylate)~~;

introducing a fluid into the mixing apparatus, the fluid selected from the group consisting of FLUX REMOVER AMS, dimethyl acetamide, dimethyl formamide, cyclohexane, dimethyl sulfoxide, and combinations thereof;

mixing the fluid with the polymer;

removing at least a volume of the fluid from the mixing apparatus such that an impurity is completely or at least partially removed with the fluid; and

collecting the polymer after removal of the impurity; and

coating an implantable medical device with the purified polymer.

24. (previously presented) The method of Claim 23, further comprising exposing the fluid to a temperature equal to or greater than the boiling temperature of the fluid at ambient pressure after the fluid has removed the impurity.

25. (previously presented) The method of Claim 23, wherein the mixing apparatus is selected from the group consisting of a single screw extruder, an intermeshing co-rotating extruder and a counter-rotating twin-screw extruder.

26. (previously presented) The method of Claim 23, wherein the polymer is exposed to a temperature equal to or greater than the melting temperature of the polymer.

27. (previously presented) The method of Claim 23, further comprising heating the polymer to a temperature equal to or greater than the melting temperature of the polymer.

28. (previously presented) The method of claim 23, wherein the fluid is of a type to physically entrap the impurity without dissolving the impurity.

29. (previously presented) The method of Claim 23, the method further comprising introducing a second fluid into the mixing apparatus, and mixing the second fluid with the polymer and removing the second fluid and an impurity from the mixing apparatus.

30. (canceled)

31. (previously presented) A method of manufacturing an implantable medical device, comprising:

purifying a polymer by:

introducing the polymer into a mixing apparatus, the polymer having an impurity;

introducing a first fluid into the mixing apparatus, the first fluid acting as a solvent for the impurity;

mixing the first fluid with the polymer;

removing at least a volume of the first fluid from the mixing apparatus such that the impurity is at least partially removed with the first fluid;

introducing a second fluid into the mixing apparatus, the second fluid acting as a non-solvent for the impurity;

mixing the second fluid with the polymer;

removing at least a volume of the second fluid from the mixing apparatus such that the impurity is at least partially removed with the second fluid; and

collecting the polymer after removal of the impurity; and

coating an implantable medical device with the collected polymer, or fabricating the implantable medical device with the collected polymer.

32. (previously presented) The method of Claim 31, wherein after the first fluid has removed the impurity, exposing the first fluid to a temperature equal to or greater than the boiling temperature of the first fluid at ambient pressure prior to removing the first fluid from the mixing apparatus.

33. (previously presented) The method of Claim 31, wherein after the second fluid has removed the impurity, exposing the second fluid to a temperature equal to or greater than the boiling temperature of the second fluid at ambient pressure prior to removing the second fluid from the mixing apparatus.

34. (previously presented) The method of claim 31, wherein the polymer is poly(vinylidene fluoride-co-hexaflourorpropene) or poly(butyl methacrylate).

35. (new) The method of claim 1, further comprising exposing the fluid to a temperature equal to or greater than the boiling temperature of the fluid at ambient pressure prior to removing the fluid from the mixing apparatus.

36. (new) The method of Claim 13, wherein the purifying further includes introducing a second fluid into the mixing apparatus, and mixing the second fluid with the polymer and removing the second fluid and the impurity from the mixing apparatus, wherein the second fluid is of a type that dissolves the impurity.

37. (new) The method of Claim 13, further comprising exposing the fluid to a temperature equal to or greater than the boiling temperature of the fluid at ambient pressure prior to removing the fluid.